



The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



Volume #59, Issue 3

Since 1958

March, 2017

Meeting:

March 11, 2017

Location:

First Christian Church
2102 E. Foothill Dr.
San Bernardino, CA

7:00 p.m.

Pre-meeting Dinner,
5:00 to 6:30 p.m.,

Pepper Steak
Restaurant
26589 Highland
Ave.
Highland, CA

After the meeting telescopes will be set up for viewing and members will be available to answer questions. Bring your telescope to observe with us.

*No telescope is too humble,
and beginners are always
made welcome!*

Program

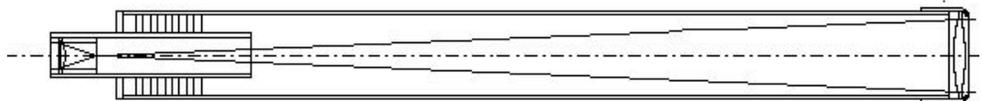
Dream Scope

What to do? What to do? You want a big scope -- a refractor -- a BIG refractor. It's not that easy to buy one, let alone finance the thing. So, what to do?

It's time to rummage through all the miscellaneous "stuff" in the garage. Perhaps you'll get an idea there. Aha! A pair of lenses -- an 8 inch pair of lenses. Ah... here's some tubing. Oh look... this focuser might work.

Well, the real story may not have been quite like that but our own Bob White is going to tell us the story of how he came to build his own 8 inch doublet refractor and the mount that carries it.

Come and get a lesson in amateur telescope making at its best!



SBVAA Officers

President: Jamie “Rue” Countryman
951-807-4344

Treasurer: Fidel Hernandez 909-864-0615

Secretary - Educational Outreach: Chris Clarke
909-384-8539 Work
909-754-3894 Home

Star Party Coordinator: Tom Lawson
909-8828198

SBVAA Webmaster: Gerald Rezes
909-810-7217

Newsletter Editor: Jim Sommer
909-792-3587

Assoc. Editor: Megan Huynh (cel)
818-572-3554

Calendar of Upcoming Events

Mar 7, Outreach, Wilson School, Colton

Mar 11, Club Meeting

March 25, Star Party, Oak Glen

April 4, Outreach, Dominguez School

April 6, Outreach, Mentone School

April 8, Club Meeting

April 29, Star Party, Pioneer Town

May 7, Outreach, Pioneer Town

May 13, Club Meeting

Rocky Planets In a White Dwarf/ Brown Dwarf System?

A pair of binary “stars,” marked SDSS 1557, have evidence of a rocky planet. They’re calling it a Tatooine system. The truth is weirder than that.

Both of the two stars in the system are not quite stars. One is a white dwarf, the remnants of a Sun-like star after it exhausts its hydrogen reserves and becomes an Earth-sized husk of white, hot, dense fury. The other is a brown dwarf, a large object that forms like a star, but ultimately fails to ignite and begin fusing hydrogen into helium. They often fall short of the mass of a small star, but are far more massive than gas giants (usually a minimum of 10 times the mass of Jupiter).

The white dwarf seems to be eating rocky asteroids trailing off from a belt and eventually falling into

the dense white dwarf. The asteroids appear to be made of mostly metals rather than ice and lighter minerals, which points to the formation of rocky planets at some point in the system’s past.

They still may be hiding there today, but there could be a giant impediment to finding them: the brown dwarf. The object was hiding in the results, as brown dwarfs give off little light, but it’s mass gives the white dwarf a noticeable tug.

“The brown dwarf was effectively hidden by the dust until we looked with the right instrument,” Steven Parsons of University of Valparaíso and University of Sheffield and a coauthor on the paper said in a [press release](#), “but when we observed SDSS 1557 in detail we recognised the brown dwarf’s subtle gravitational pull on the white dwarf.”

The study was published in [Nature Astronomy](#).

**SBVAA Calendar of Scheduled Events
2017**

March 7, Outreach, Wilson School, Colton

March 25, Star Party, Oak Glen

April 4, Outreach, Dominguez School

April 6, Outreach, Mentone School

April 29, Star Party, Pioneer Town

May 7, Outreach, Pioneer Town

May 20, Outreach, Oak Glen

June 23 - 25, GRANDVIEW Star Party



July 8, Summer Social at the Sizzler

July 22, Star Party, Oak Glen

August 5, Annual Club BBQ

September 16, Outreach, Oak Glen

**September 22 - 24, GRANDVIEW Star
Party**

October 28, Outreach, Pioneer Town

November 18, Star Party, Pioneer Town



As promised, the Calendar of Scheduled Events has been updated. Wildlands Conservancy has confirmed with Chris & Rue.

There are a lot of outreaches! Our club is developing a reputation for quality public programs and requests are at an all time high.

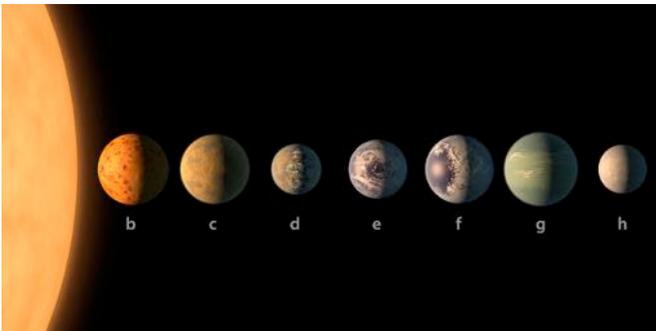
Be proud my fellow members.

NASA Discovers Seven Planets In a Single Star System

NASA's Spitzer Space Telescope has revealed the first known system of seven Earth-size planets around a single star. Three of these planets are firmly located in the habitable ("Goldielocks") zone, the area around the parent star where a rocky planet is most likely to have liquid water.

The discovery sets a new record for greatest number of habitable-zone planets found around a single star outside our solar system. All of these seven planets could have liquid water -- key to life as we know it -- under the right atmospheric conditions, but the chances are highest with the three in the habitable zone.

"This discovery could be a significant piece in the puzzle of finding habitable environments, places that are conducive to life," said Thomas Zurbuchen, associate administrator of the agency's Science Mission Directorate in Washington. "Answering the question 'are we alone' is a top science priority and finding so many planets like these for the first time in the habitable zone is a remarkable step forward toward that goal."



At about 40 [light-years](#) (235 trillion miles) from Earth, the system of planets is relatively close to us, in the constellation Aquarius.

This exoplanet system is called TRAPPIST-1, named for The Transiting Planets and Planetesimals Small Telescope (TRAPPIST) in Chile. In May 2016,, researchers using TRAPPIST announced they had discovered three planets in the system. Assisted by several ground-based telescopes, including the European Southern Observatory's Very Large Telescope, Spitzer confirmed the existence of two of these planets and discovered five additional ones, increasing the number of known planets in the system to seven.

Following up on the Spitzer discovery, NASA's Hubble Space Telescope has initiated the screening of four of the planets, including the three inside the habitable zone. These observations aim at assessing the presence of puffy, hydrogen-dominated atmospheres, typical for gaseous worlds like Neptune, around these planets. In May 2016, the Hubble team observed the two innermost planets, and found no evidence for such puffy atmospheres. This strengthened the case that the planets closest to the star are rocky in nature.

Spitzer, Hubble, and Kepler will help astronomers plan for follow-up studies using NASA's upcoming James Webb Space Telescope, launching in 2018. With much greater sensitivity, Webb will be able to detect the chemical fingerprints of water, methane, oxygen, ozone, and other components of a planet's atmosphere. Webb also will analyze planets' temperatures and surface pressures -- key factors in assessing their habitability.

The wonders of discovery continue!

For more details, go to <https://www.jpl.nasa.gov/news/news.php?feature=6756>.